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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,951	04/19/2001	Antonio Jose de Araujo Porto		1254

7590 11/14/2002
Dr. Max Fogiel
61 Ethel Road West
Piscataway, NJ 08854

EXAMINER

NGUYEN, TRINH T

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 11/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

S.M.

Office Action Summary

Application No.

09/837,951

Applicant(s)

PORTO ET AL.

Examiner

Trinh T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 16, 19, 20, and 26 are objected to because of the following informalities:
in claim 16: line 4, -- first -- should be inserted after "along a"; line 8, -- second -- should be inserted after "one other"; in claim 19, line 3, -- second -- should be inserted after "said other"; in claim 20, line 3, "the second other axis" should be rewritten as --the other second axis--; in claim 26, line 22, "the second other axis" should be rewritten as --the other second axis--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claims 18, 19, and 26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case, the phrase "said contours being shaped onto...of upper and lower faces of said skirt" in claim 18 and the phrase "additional contours are shaped onto...being a longitudinal axis" in claim 19 are not found in the specification. Note that claim 26 has similar problems as indicated in claims 18 & 19 above.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18, 19, 22, 24, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 18: regarding the phrase "said contours being shaped onto...of upper and lower faces of said skirt", it is not understood what is being claimed since there is no support/explanation in the specification for this particular limitation.

In claim 19: regarding the phrase "additional contours are shaped onto...being a longitudinal axis", it is not understood what is being claimed since there is no support/explanation in the specification for this particular limitation.

In claim 22: the phrase "said skirt being accommodated within a circumference of said skirt during the subsequent manufacturing step (B)" is unclear and confusing and it is not understood what is being claimed.

In claim 24: the phrase "within another plane" is confusing because it is unclear as to what "another plane" defines and/or intends to be encompassed.

In claim 26: in lines 28 & 31, note that claim 26 has similar problems as indicated in claims 22 & 24 above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 16-18, 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Berchem (US 4,662,047).

Berchem teaches a method of manufacturing piston and components for pistons for an internal-combustion engine by preliminarily forging a blank to specific contours to form a preliminarily shaped piston (1a as shown in Fig. 1) and then subsequently forging the preliminarily shaped piston to create additional contours (2a of 1b as shown in Fig. 2) along one other. Note that Berchem's method does teach a method of forming a piston or piston component by two separate forging step wherein each step resulting a different contour along a different axis (see lines 5-55 of col. 2, lines 50-62 of col. 3 and lines 1-30 of col. 4).

Regarding claim 17, Berchem's method does teach preliminarily shaping the blank along a longitudinal axis of the blank.

Regarding claim 18, note Berchem's blank can be interpreted as a rod-like blank and that the blank is upsetted to form a skirt (2 and/or 3 in Fig. 1) and a cavity (the area between 4 in Fig. 1). As shown in Fig. 2, note that contours (2a, 6, 7 and/or 8) are shaped onto the skirt (2 and/or 3 in Fig. 1) "along a longitudinal axis of the skirt in vicinities of inner and outer circumferences and of upper and lower faces of the skirt".

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Regarding claim 21, note that Berchem's preliminarily shaped piston has a reducible wall thickness (note that during the forging process at least one of the wall of the spaced piston will be reduced in thickness) and reinforcements (2a, or 6, or 8 in Fig. 2) during the subsequent manufacturing step (B).

Regarding claim 22, note that Berchem's method does include shaping the skirt on one of the two forging steps.

Regarding claim 23, note that Berchem's blank is made out of steel (see line 9 of col. 2).

Regarding claim 24, note that Berchem's method does include reforming (by a piercing tool or embossing tool) the piston.

Regarding claim 25, note that Berchem's method does include removing excess material (see lines 24-25 of col. 4) and producing recesses by punching (see lines 17-18 of col. 4).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 19, 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berchem (US 4,662,047).

Berchem teaches most of the claimed invention except for using the same forging tool in both forging steps. However, whether one chooses to use the same

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forging tool or another different forging tool is a matter of design choice since there isn't any new or unexpected result obtained, and it appears that the invention would perform equally well by using the same or different forging tool as taught by the prior art.

Further noted that heating a blank material before inserting it into a forging tool is an inherent technique that one must carry out in a forging process.

Regarding claim 19, as best understood, it would have been obvious to one having ordinary skill in the art at the time the invention was made to forge at approximately 90 degree relative to a first axis, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

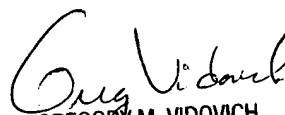
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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich can be reached on (703) 308-1148. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

ttn
November 12, 2002


GREGORY M. VIDOVICH
PRIMARY EXAMINER